

Accordingly, Applicants respectfully submit that the Examiner's rejection under 35 U.S.C. § 112 has been overcome.

In the above-mentioned Final Office Action, the Examiner also rejected claims 34 and 35 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,900,909 ("Parulski I"). The Examiner also rejected claims 1-7, 9-10, 14-16, 18-27 and 29-30 under 35 U.S.C. § 103 as being unpatentable over Parulski I in further view of U.S. Patent No. 5,559,554 ("Uekane"). The Examiner also rejected claims 8 and 28 as being unpatentable over Parulski I in view of Uekane in further view of in further view of U.S. Patent No. 5,270,831 ("Parulski II"). The Examiner also rejected claims 11, 12, 13, 17 and 31-33 under 35 U.S.C. § 103 as being unpatentable over Parulski in view of Uekane in further view of U.S. Patent No. 5,949,408 ("Kang").

The Examiner rejected claims 34 and 35 as being anticipated by Parulski I. In so doing, the Examiner stated that Parulski I:

teaches that [a] camera can be tethered to the computer by an interface cable (not shown) so that the images can be downloaded and displayed. Since the memory card (24 would be transferred to the computer for displaying, the interface cable would have [been] used instead to couple the display via the computer with the camera.

Applicants respectfully traverse the Examiner's rejection. Independent claim 34 recites a "digital camera capable of displaying an image having a first orientation . . ." The digital camera includes

means for storing the image in a compressed format image and storing the first orientation;

means for determining a second orientation associated with the digital camera, the second orientation capable of being different from the first orientation;

means coupled with the determining means for comparing the first orientation and the second orientation;

means coupled with the determining means for rotating the image from the first orientation to the second orientation if the first orientation is different from the second orientation; and

a display coupled with the rotating means for displaying the image in the second orientation.

Thus, the digital camera stores both the image and first orientation relating to the image. The first orientation of the image is based on an orientation of the digital camera at the time the image is captured. See, Figure 6 and specification, page 13, lines 4-21. Consequently, when reference is made to the specification, it is clear that the first orientation associated with the image is determined using the orientation of the digital camera at the time that the image is captured.

When the image is to be displayed, the second orientation of the digital camera is determined. The second orientation of the digital camera can be different than the first orientation of the image because the image may be displayed at a time other than at image capture. See Figures 9, 12 and 13 of the present application. The digital camera recited in claim 18 rotates the image, if necessary, so that the image is displayed in the same orientation as the digital camera. The image is rotated if the first orientation of the image is different from the second orientation of the digital camera. As a result, the digital camera recited in claim 34 is capable of displaying the image in an upright orientation to a user of the digital camera. See FIG. 10A, FIG. 10B, and FIG. 11. Regardless of the orientation of the digital camera when the image was captured and, therefore, the orientation of the image with respect to the current orientation of the digital camera, the user can view the image upright on the display without having to rotate the digital camera. This is accomplished without requiring the user to tether the digital camera to a computer system or other means for rotating the image.

In contrast, Parulski neither teaches nor suggests the digital camera recited in claim 34. In particular, Parulski neither teaches nor suggests displaying an image captured by the digital camera in the proper orientation on the display of the digital camera. Parulski also fails to teach or suggest determining the second orientation of the digital camera separate from the first orientation of the image and comparing the orientation of the digital camera to that of the image.

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The digital camera of Parulski I functions in conjunction with a separate computer system. The digital camera of Parulski I merely stores the information relating to the image and its orientation. The orientation of the image is determined by the orientation of the digital camera at the time that the image is captured. Parulski I, col. 5, lines 43-53. The image information is stored in a memory card and read by a processor (32) within a **separate computer system**. Parulski I, col. 3, lines 50-53. This separate processor can read this information from a memory card that alone is coupled to the computer system. Parulski I, col. 3, lines 50-53. Alternatively, the separate processor retrieves the image information from a memory card that is both coupled to the computer system and tethered to the digital camera. Parulski I, col. 3, lines 54-58. Based on the information associated with the images, the images are properly displayed on the display of the separate computer system, not on a display for the digital camera itself. Parulski I, col. 4, lines 15-20 and Fig. 2 (indicating that the CRT display 34 is part of the computer system to which the memory card is attached).

As recited in claim 34, the image in the digital camera is already considered to have a first orientation. A second orientation, which can be different from the first orientation, is associated with the digital camera of claim 34. The digital camera recited in claim 34 also includes means for comparing the second orientation of the digital camera with the first orientation of the image. Based on this comparison, the image may be rotated for display on the digital camera. As a result, the digital camera recited in claim 34 can display the image in the proper orientation at other times.

In contrast, Parulski I neither teaches nor suggests separately determining the orientation of the digital camera, which can be different from the orientation of the image, and comparing this orientation to that of the image. Parulski I merely determines the orientation of the digital

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camera at the time the image is captured and considers this to be the orientation of the image.

Parulski I, col. 5, lines 43-53. This information is stored with the image and used at the time of display in order to display the image upright on the display for the computer system of Parulski I. Parulski I never determines a second orientation of the digital camera that is separate from the image. Applicants can also find no mention in Parulski I of comparing the second orientation of the digital camera to the first orientation of the image. Parulski I need not perform these functions because the orientation of the digital camera of Parulski I other than at the time of image capture is immaterial to presenting the image on the display of the computer system. A user would not generally rotate the display of the computer system, so a determination of a second orientation of the digital camera is unnecessary. Furthermore, if Parulski I did account for the orientation of the digital camera at times other than image capture, the image might be improperly displayed on the display of the computer system of Parulski I. Consequently, Parulski I cannot teach or suggest determining a second orientation for the digital camera and comparing this orientation to the first orientation of the image.

Furthermore, Parulski I neither teaches nor suggests that the images stored by the digital camera of Parulski I can be presented upright on a display of the digital camera. As discussed above, the images are rotated for viewing on the display of the separate computer system of Parulski I. There is no indication in Parulski I that the digital camera depicted in Fig. 2 of Parulski I in and of itself contains a display, much less a display capable of depicting the images in an upright orientation. Instead, the images are only presented in an upright orientation on the display of the separate computer system. Consequently, Parulski I cannot teach or suggest the digital camera recited in claim 34.

Thus, Parulski I fails to teach or suggest at least two aspects of the digital camera recited

in claim 34. Parulski fails to teach or suggest displaying the image in the second, and preferably upright, orientation on a display of the digital camera. Furthermore, Parulski I fails to teach or suggest determining a second orientation of the digital camera, that may be different from the first orientation of the image, and comparing the second orientation of the digital camera to the first orientation of the image. Consequently, Parulski fails to teach or suggest the digital camera recited in claim 34. Accordingly, Applicants respectfully submit that claim 34 is allowable over the cited references.

Claim 35 depends upon independent claim 34. Consequently, the arguments herein apply with full force to claim 35. Accordingly, Applicants respectfully submit that claim 35 is allowable over the cited references.

In the above-mentioned Office Action, the Examiner also rejected claims 1-7, 9-10, 14-16, 18-27 and 29-30 as being obvious in light of Parulski I in view of Uekane. In so doing, the Examiner stated that Parulski I:

fails to specifically disclose [that] the display is included in the camera. Uekane et al. '554 teaches capturing images and displaying them on a monitor screen {6}. By [sic] having the display included in the camera would be advantageous for giving the user the opportunity to view images instantly instead of having to provide a computer for viewing the images. Since cameras with displays are notoriously well known in the art, it would have been obvious to combine . . . [Parulski I] with Uekane et al. '554 for the purpose of easily obtaining the images.

Applicants respectfully traverse the Examiner's rejection. Claim 1 recites a method for "viewing an image in an capture unit." The method includes the steps of:

- providing a first orientation associated with the image;
- storing the image, including storing the information relating to the first orientation associated with the image;
- providing a second orientation associated with the image capture unit, the second orientation capable of being different from the first orientation;
- determining whether the first orientation is different from the second orientation; and
- displaying the image in the second orientation on the display of the image capture unit.

Similarly, claim 18 recites a system for viewing images **in an image capture unit**. The system recited in claim 18 includes:

- an image associated with a first orientation
- means for storing the image, including storing information relating to the first orientation associated with the image;
- a second orientation associated with the image capture unit, the second orientation capable of being different from the first orientation, wherein it is determined whether the first orientation is different from the second orientation;
- and
- a display, in the image capture unit, to display the image in the second orientation;
- wherein the image is rotated from the first orientation to the second orientation when the first orientation is different from the second orientation for viewing on the display of the image capture unit.

Thus, the method and system recited in claims 1 and 18 determine a first orientation for an image and a second orientation for the image capture unit. The first orientation of the image is based on an orientation of the digital camera at the time the image is captured. See, Figure 6 and specification, page 13, lines 4-21. Consequently, when reference is made to the specification, it is clear that the first orientation associated with the image is determined using the orientation of the image capture unit at the time that the image is captured.

Furthermore, the method and system recited in claims 1 and 18, respectively, can store the image and information related to the first orientation of the image. The second orientation of the digital camera can be different than the first orientation of the image because the image may be displayed at a time other than at image capture. See Figures 9, 12 and 13 of the present application. The method and system recited in claims 1 and 18, respectively, can also compare the first orientation of the image to the second orientation of the image capture unit. Based on this comparison, the image may be rotated for presentation on the display of the image capture unit.

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Thus, in contrast to conventional systems, the method and system recited in claims 1 and 18 allow an image capture device to display an image, particularly a previously captured image, in the same orientation as the capture device. Image capture devices, such as digital cameras, generally include a record mode and a play mode. In the play mode, images captured previously by the digital camera being used or another image capture device can be viewed. Specification, page 2, lines 2-4. In the record mode, the display is used as a viewfinder. When the captured image is viewed later, in play mode, the digital camera may be in a different orientation than when the image was captured. If a conventional capture unit is employed, the image is merely displayed in its original orientation with respect to the digital camera. The user will have to rotate the digital camera to view the image in the proper orientation, which is inconvenient. Specification page 2, line 20 – page 3, line 2.

To remedy this, the method and system recited in claims 1 and 18, respectively, can automatically rotate the image when the image is to be displayed. When an image is captured, the first orientation of the image is also stored. Thus, as recited in claims 1 and 18, the image is associated with a first orientation. This first orientation depends upon the orientation of the image capture unit when the image is captured. When the image is to be viewed later, the inventions recited in independent claims 1 and 18 compare the first orientation to the second orientation of the image capture device. Thus, when the first orientation differs from the second orientation, the image is rotated to the second orientation and provided to the display. When the first orientation and the second orientation are the same, the image is provided to the display in the same orientation. As a result, an image can be captured in the desired orientation during a record mode, and displayed in the same orientation as the image capture device in a play mode. Thus, through the combination of elements recited in claims 1 and 18, a user no longer has to

rotate the image capture device to view the image in the proper orientation. Thus, viewing of images is simplified.

In contrast, Parulski I in view of Uekane fails to teach or suggest the method or system recited in claims 1 or 18, respectively. As discussed above with respect to claim 34, Parulski I fails to teach or suggest determining a first orientation for the image and a second orientation for the image capture device, which may be different from the first orientation of the image.

Parulski I also fails to teach or suggest comparing the first orientation of the image to the second orientation of the image capture device. Instead, Parulski I considers the orientation of the image capture device at the time of capture to be the orientation of the image. The orientation of the image only is then used to determine whether to rotate the image for display. Thus, Parulski only determines the first orientation of the image. Furthermore, Parulski I fails to teach or suggest providing the rotated image on a display of the image capture unit. Instead, Parulski I presents the image for viewing on a display for a separate computer system.

Uekane is directed at a video camera having a display that can rotate with respect to the camera lens. Uekane, col. 1, lines 7-13. Uekane discusses three orientations: normal, self-image picture-taking state I (180 degree rotation in one direction around the joint), and self-image picture-taking state II (180 degree rotation in the opposite direction around the joint). Uekane, col. 10, lines 3-15, Figures 12, 13, and 14. Uekane is concerned with allowing a user to view the image when the user is capturing the image. For example, Uekane states that “[f]or effecting the self-image taking, with the camera portion 1 fixed, monitor portion 2 is rotated upside down . . . [T]his state is called self-image picture-taking state I . . .” Uekane, col. 5, lines 9-17. Similarly, Uekane also states that “[f]or effecting the self-image taking[in another state], with the monitor portion 2 fixed, camera portion 1 is rotated upside down . . . [T]his state is called self-image

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picture-taking state II . . .” Uekane, col. 5, lines 24-30. Self-image picture-taking states I and II are also depicted in Figures 13 and 14, respectively. Uekane does display the image upright while the image is being captured. Uekane, col. 14, lines 3-5 and 21-26. Based on the orientation of the lens (i.e. whether the camera is in self-image picture-taking state I or II), Uekane alters the way in which text is displayed to the user. Compare Uekane Fig. 6 with Uekane Fig. 13. The images displayed on the view screen are captured on a videotape. Uekane, col. 14, lines 5-12.

Parulski I in view of Uekane fail to teach or suggest the method and system recited in claims 1 and 18, respectively. One of ordinary skill in the art would not be motivated to combine the teachings of Uekane with those of Parulski I. Furthermore, even if the teachings of Uekane are added to those of Parulski I, the combination neither teaches nor suggests the method and system recited in claims 1 and 18.

Uekane is directed at presenting images currently being captured to the user of a video camera. Thus, Uekane is similar to the record mode of a conventional digital camera. In contrast, Parulski I is directed at viewing previously captured images for a digital camera which captures still images. Thus, Parulski is similar to the play mode of a conventional digital camera. The video camera of Uekane and the combination of the digital camera and computer system of Parulski I each apparently function for their intended purpose. Thus, one of ordinary skill in the art would not be motivated to add the teachings of Uekane to those of Parulski I.

Even if the teaching of Uekane were added to those of Parulski I, the combination would neither teach nor suggest the method and system recited in claims 1 and 18. Uekane could be considered to add the record mode, previously discussed, to the digital camera of Parulski. Thus, a display on the digital camera of Parulski could present images to a user as the images are being

captured. However, the combination would still fail to teach or suggest use of a first orientation of the image and a second orientation of the image capture unit, which could be different from the first orientation of the image. Furthermore, the combination would fail to teach or suggest comparing the first orientation of the image to the second orientation of the image capture device and rotating the image if the second orientation differs from the first orientation.

Like Parulski, Uekane determines only the orientation of the image at the time of capture and uses this orientation in performing subsequent functions. The orientations of the images in Uekane are determined with respect to the video camera of Uekane at the time of image capture. Thus, the orientation of the images in Uekane is analogous to the first orientation of the image recited in claims 1 and 18. Instead of portrait or landscape images, Uekane provides self-image picture-taking I and self-image picture-taking II images. Because Uekane is concerned with showing the images as they are being captured, Uekane need not determine a second orientation of the image capture unit which may be different from the first orientation of the image. Instead, the orientation of the image capture unit of Uekane is the same as and used in providing the orientation of the images of Uekane. Uekane then uses the orientation of the images to perform other functions, such as providing text in the desired orientation. Thus, Uekane cannot teach or suggest the use of a second orientation of the image capture unit that may be different from the first orientation of the image.

Furthermore, Uekane cannot teach or suggest comparing the first orientation of the image to the second orientation of the image capture unit. As discussed above, Uekane only determines the orientations of the images. Uekane never determines a second orientation of the image capture unit. Consequently, Uekane cannot teach or suggest comparing the first orientation of the image to the second orientation of the image capture unit and rotating the images if the first

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and second orientations differ. Consequently, Uekane cannot remedy the defect of Parulski I. Parulski I in view of Uekane, therefore, fail to teach or suggest the method and system recited in claims 1 and 18, respectively.

Claims 2-7, 9-10 and 14-16 depend on independent claim 1. Claims 19-27 and 29-30 depend on independent claim 18. Consequently, the arguments herein apply with full force to claims 2-7, 9-10, 14-16, 19-27 and 29-30. Thus, Applicant respectfully submits that claims 2-7, 9-10, 14-16, 19-27 and 29-30 are allowable over Parulski I in view of Uekane.

The Examiner also rejected claims 8 and 28 under 35 U.S.C. § 103 as being obvious in light of Parulski I in view of Uekane in further view of Parulski II. In so doing, the Examiner stated that Parulski II "discloses that some degree of cropping of the image will be necessary in order to fit the image with the display. It would have been obvious to use the same method in [a] camera with a display having a certain amount of aspect ratio to fit a reoriented image so that the viewer may see the image since the ratios will have different values.

Applicant respectfully traverses the Examiner's rejection. Claims 8 and 28 depend upon independent claims 1 and 18, respectively. Consequently, the arguments herein with respect to Parulski I in view of Uekane apply with full force to claims 8 and 28. As discussed above, Parulski I in view of Uekane fail to teach or suggest use a first orientation of the image and a second orientation of the image capture unit, comparison of the first orientation and the second orientation, and rotating the image if the first orientation is different from the second orientation.

Parulski II fails to remedy this defect of Parulski I in view of Uekane. Parulski II is directed at a system for scanning images that have been captured on photographic film. Parulski II, Abstract lines 1-6. The system of Parulski II scans in images on a strip of photographic film. Parulski II col. 4, lines 32-37. Once the photographic film has been scanned, a user views the

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scanned images, determines the orientations of the scanned images, and informs the system of the orientations of the scanned images. Parulski II col. 5, lines 63-67; col. 6, lines 9-15. The scanned images are then stored on a transportable medium, such as a CD. Parulski II, col. 4, lines 50-59. Once the scanned images have been stored to a transportable medium, the transportable medium can be taken to a player which allows the scanned image to be displayed. Parulski II, col. 4, lines 50-59; Figure 1, item 20; and Figure 4. This player is apparently separate from the unit which scans the images. See Parulski II, Figures 1 and 4. The player can use the orientation of the scanned images to display the scanned images in the desired orientation. Thus, the transportable medium is placed in a separate playback unit in order for the images to be displayed in the desired orientation.

Parulski II is concerned with processing of still images that have previously been captured on photographic film. This is in contrast to Uekane, which is directed to a video camera, and Parulski I, which is directed to a digital camera. If Uekane is combined with Parulski I to provide images in record mode, there is no need to use Parulski II because the data is already stored digitally. Consequently, one of ordinary skill in the art would not be motivated to combine Parulski II with Parulski I in view of Uekane.

Even if Parulski II is added to the teachings of Parulski I and Uekane, the combination would neither teach nor suggest the method and systems of claims 8 and 28. Like Parulski I and Uekane, Parulski II is only concerned with the orientation of the images as they are scanned in. See Parulski II Fig. 2 and accompanying discussion. Thus, Parulski II does not determine a second orientation of the image capture unit and does not compare the second orientation of the image capture unit to the first orientation of the image. Consequently, Parulski II cannot remedy the defects of Parulski I in view of Uekane. Parulski I in view of Uekane in further view of

Parulski II thus fails to teach or suggest the method and system recited in claims 8 and 28, respectively. Accordingly, claims 8 and 28 are allowable over the cited references.

The Examiner also rejected claims 11, 12, 13, 17 and 31-33 under 35 U.S.C. § 103 as being obvious in light of Parulski and Uekane in view of Kang. In so doing, the Examiner pointed to Kang as teaching the use of icons.

Applicants respectfully traverse the Examiner's rejection. Claims 11-13 and 17 and claims 31-33 depend upon independent claims 1 and 18, respectively. Consequently, the arguments herein with respect to Parulski in view of Uekane apply with full force to claims 11-13, 17 and 33. As discussed above, Parulski I in view of Uekane fail to teach or suggest use a first orientation of the image and a second orientation of the image capture unit, comparison of the first orientation and the second orientation, and rotating the image if the first orientation is different from the second orientation.

Kang fails to remedy the defect of Parulski I in view of Uekane. Kang teaches the use of icons in a palmtop personal organizer. Kang abstract. However, Applicants can find no mention in Kang of using both a first orientation of an image and a second orientation of an image capture unit. Furthermore, Applicants can find no mention in Kang of comparing the first orientation to the second orientation or of rotating the image if the first orientation is different from the second orientation. Consequently, Kang cannot remedy the defects of Parulski I in view of Uekane. Accordingly, Applicants respectfully submit that claims 11, 12, 13, 17 and 31-33 are allowable over the cited references.

Applicants also note that the Examiner rejected claims 34 and 35 as being anticipated by Parulski I. However, claim 34 includes similar recitations as independent claims 1 and 18. Consequently, the arguments herein with respect to Parulski I in view of Uekane, Parulski I in

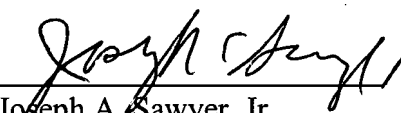
view of Uekane in further view of Parulski II and Parulski I in view of Uekane in further view of Kang apply with full force to claims 34 and 35. Accordingly, Applicants respectfully submit that claims 34 and 35 are allowable over the cited references.

Claims 36-38 depend upon independent claims 1, 18 and 34, respectively. Applicants also note that claims 36-38 further indicate that the images being displayed on the image capture unit or digital camera are previously captured images. Thus, claims 36-38 make it clearer that the method, system and digital camera recited in claims 36, 37 and 38 are capable of displaying previously captured images, as in play mode. Accordingly, the arguments herein apply with full force to claims 36-38. Consequently, Applicants respectfully submit that claims 36-38 are allowable over the cited references.

In view of the foregoing, it is submitted that the claims in the application are patentable over the cited reference and are in condition for allowance. Reconsideration of the rejections and objections is requested.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

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